

CLAIM AMENDMENTS

Please replace the pending claims with the following listing of claims:

1-33. (Cancelled)

34. (New) An optical switch, comprising:

an input array and an output array of optical elements;

a space between the input and output array, whereby said input array of optical elements is spaced from said output array;

means for directing radiation beams; and a further array of optical elements optically located between said input and output arrays;

wherein the pitch of the optical elements of said further array of optical elements is inferior to the pitch of at least one of said input array and said output array; and

said further array of optical elements is a reflective array.

35. (New) A switch according to claim 34, wherein said further array of optical elements is located where optical paths cross each other.

36. (New) A switch according to claim 34, wherein said further array of optical elements is located in the gaps between where the optical paths cross each other.

37. (New) A switch according to claim 34, wherein radiation is inputted to the switch via collimators onto an array of tilting mirrors.

38. (New) An optical switch, comprising:
an input array and an output array of optical elements;
a space between the input and output array, whereby said input array of optical elements is spaced from said output array;
means for directing radiation beams; and
a further array of optical elements optically located between said input and output arrays;
wherein the pitch of the optical elements of said further array of optical elements is inferior to the pitch of at least one of said input array and said output array; and
said further array of optical elements is a striped mirror.

39. (New) A switch according to claim 38, wherein said further array of optical elements is located where optical paths cross each other.

40. (New) A switch according to claim 38, wherein said further array of optical elements is located in the gaps between where the optical paths cross each other.

41. (New) A switch according to claim 38, wherein radiation is inputted to the switch via collimators onto an array of tilting mirrors.

42. (New) An optical switch, comprising:
- an input array and an output array of optical elements;
 - a space between the input and output array, whereby said input array of optical elements is spaced from said output array;
 - means for directing radiation beams; and
 - a further array of optical elements optically located between said input and output arrays;
- wherein the pitch of the optical elements of said further array of optical elements is inferior to the pitch of at least one of said input array and said output array; and
- said further array of optical elements consists of a combination of at least any two of the following elements: striped mirror, lenslet and reflective element.
43. (New) A switch according to claim 42, wherein said further array of optical elements is located where optical paths cross each other.
44. (New) A switch according to claim 42, wherein said further array of optical elements is located in the gaps between where the optical paths cross each other.
45. (New) A switch according to claim 42, wherein radiation is inputted to the switch via collimators onto an array of tilting mirrors.

46. (New) An optical switch, comprising:

- an input array and an output array of optical elements;
- a space between the input and output array, whereby said input array of optical elements is spaced from said output array;
- means for directing radiation beams; and
- a further array of optical elements optically located between said input and output arrays;

wherein the pitch of the optical elements of said further array of optical elements is inferior to the pitch of at least one of said input array and said output array; and

wherein the input array incorporates collimators adapted to be displaced in a rocking motion within a given pitch, the optical pitch of the further array of elements being substantially half the pitch of the collimators and the further array of elements being located substantially halfway between the input and output array.

47. (New) A switch according to claim 46, wherein said further array of optical elements has the primary function of reforming the beams and is placed at a location in said space between the inputs and outputs where reforming the beams allows the achievable optical path length between the input and output arrays to be greater than the optical path length achievable without said further array of elements.

48. (New) An optical switch, comprising:

- an input array and an output array of optical elements;
- a space between the input and output array, whereby said input array of optical elements is spaced from said output array;
- means for directing radiation beams; and
- a further array of optical elements optically located between said input and output arrays;

wherein the pitch of the optical elements of said further array of optical elements is inferior to the pitch of at least one of said input array and said output array; and

wherein the input array incorporates collimators adapted to be displaced in a rocking motion within a given pitch, the optical pitch of the further array of elements being substantially one third of the collimators and the further array of elements being located substantially one third of the optical path length between the input and output array.

49. (New) A switch according to claim 48, wherein said further array of optical elements has the primary function of reforming the beams and is placed at a location in said space between the inputs and outputs where reforming the beams allows the achievable optical path length between the input and output arrays to be greater than the optical path length achievable without said further array of elements.

50. (New) An optical switch, comprising:

- an input array and an output array of optical elements;
- a space between the input and output array, whereby said input array of optical elements is spaced from said output array;
- means for directing radiation beams; and
- a further array of optical elements optically located between said input and output arrays;

wherein the pitch of the optical elements of said further array of optical elements is inferior to the pitch of at least one of said input array and said output array; and

wherein the input array incorporates collimators adapted to be displaced in a rocking motion within a given pitch, the optical pitch of the further array of elements being substantially one fourth of the collimators and the further array of elements being located substantially one fourth of the optical path length between the input and output array.

51. (New) A switch according to claim 50, wherein said further array of optical elements has the primary function of reforming the beams and is placed at a location in said space between the inputs and outputs where reforming the beams allows the achievable optical path length between the input and output arrays to be greater than the optical path length achievable without said further array of elements.

52. (New) An optical switch, comprising an input array of moveable beam steering arrangements; an output array of moveable beam steering arrangements; and a passive array of

optical elements optically located between said input and output arrays of moveable beam steering arrangements; wherein the pitch of said passive array is inferior to the pitch of said input and output arrays; and said input and output arrays incorporate moveable collimators which directly communicate with individual elements of said passive array.

53. (New) A switch according to claim 52, wherein said passive array of optical elements is located substantially at the centre of the space between the input and output arrays of moveable collimators and the pitch of the elements is substantially half the pitch of the arrangements of the input and output arrays.

54. (New) A switch according to claim 52, wherein said passive array of optical elements is located substantially at a third of the optical path length from at least one of said input array and said output array and the pitch of the elements is substantially a third of the pitch of said array of beam steering arrangements.

55. (New) A switch according to claim 52, wherein a second passive array of optical elements is located substantially at a third of the optical path length from the input array provided said first passive array is located a third of the optical path length from the output of optical elements.

56. (New) A switch according to claim 52, wherein said passive array of optical elements is located substantially at a quarter of the optical path length from at least one of said

input array and said output array and the pitch of the elements is substantially a quarter of the pitch of said array of beam steering arrangements.

57. (New) A switch according to claim 52, wherein said further array of optical elements is a reflective array.

58. (New) A switch according to claim 52, wherein said further array of optical elements is a striped mirror.

59. (New) A switch according to claim 52, wherein said further array of optical elements is a lenslet array.

60. (New) A switch according to claim 52, wherein said further array of optical elements consists of a combination of at least any two of the following elements: striped mirror, lenslet and reflective element.

61. (New) A switch according to claim 52, wherein radiation is inputted to the switch via collimators onto an array of tilting mirrors.